

Erts-A Program for Finland: Part 3, Hydrology

Demonstrating applicability of satellite data to hydrology

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A brief report on the usability of satellite images in hydrology
and limnology.

The images this report is based on were taken 30.-31.08.1972
and their identification numbers are 1038-09275 and
1039-09333. The area seen in these pictures is in Western
Finland near Vaasa.

The following were noted:

Open rocks, cultivated lands, forests, peat lands, lakes and
rivers could be distinguished from each other in the pictures.

On cultivated lands one could distinguish cultivated peat
lands from other cultivated lands and pastures from other
categories of cultivated land.

Pine forests, spruce forests, spruce-hardwood forests and
hardwood forests were seen in the pictures. Areas cleared
by cutting were sometimes distinguishable.

Spruce-hardwood swamps, pine swamps, open bogs and drained
bogs could be distinguished from other terrain types.

Peat land, moraine and gravel could be distinguished very
often by means of the vegetation or moisture conditions of
the soil, which appeared in the pictures.

Shallow lakes with a lot of rushes and deep lakes with little
or no rushes could be distinguished.

Density differences - which were not always caused by the
differences in depths - were apparent on the sea near the
coast in the images. It may be that the differences in
densities in the pictures are caused by algal production,
pelagic sediments or differences in salinity. However, more

(E73-10101) DEMONSTRATING APPLICABILITY
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REPORT ON THE USABILITY OF SATELLITE
IMAGES IN (Forest Service, Fairbanks,
Alaska.) 3 p HC \$3.00
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images taken at suitable times are needed before this problem is solved.

There are sufficient details for hydrological and limnological interpretation in the images, but in order to get results one has to have more images at suitable times of the year.

The area seen in the images 1038-09275 and 1039-09333

▨ areas, where density differences may be caused by algal production, pelagic sediments or differences in salinity.

